BOSCH
Invented for life

Professional Series Dual Detectors ISC-PDL1-W18G and ISC-PDL1-W18H

- **18 m x 25 m (60 ft x 80 ft) coverage, field selectable to 7.5 m x 10 m (25 ft x 33 ft)**
- **Sensor data fusion technology**
- **2 m to 3 m (7 ft to 10 ft) mounting height, no adjustments required**
- **Tri-focus optics technology**
- **Microwave anti-masking feature**
- **Active white light suppression**
- **Dynamic temperature compensation**
- **Remote walk test**
- **Alarm memory**
- **Draft and insect immunity**

The Professional Series Dual Detectors ISC-PDL1-W18G and ISC-PDL-W18H are exceptionally suited for commercial indoor applications. The self-locking two-piece enclosure, built-in two-way bubble level, flexible mounting height, and three optional mounting brackets simplify installation and reduce service time. Sensor data fusion technology ensures that the detectors send alarm conditions based on precise information. Microwave anti-masking makes it difficult for intruders to obscure the detectors. Tri-focus optics technology eliminates coverage gaps and responds efficiently to intruders. The powerful combination of unique features in the Professional Series delivers superior catch performance and virtually eliminates false alarms.

Functions

Sensor Data Fusion Technology

Sensor data fusion technology is a unique feature that uses a sophisticated internal microcontroller to gather signals from five sensors: two pyroelectric sensors, a Doppler microwave sensor, a room temperature sensor, and a light level sensor. The microcontroller analyzes and compares the sensor data to make the most intelligent alarm decisions in the security industry.

Microwave Anti-Masking

Sends a supervision trouble signal if microwave reflective material is placed within 30.5 cm (1 ft) of detector.

Supervised Microwave and PIR

Provides single technology coverage if the microwave subsystem fails.

Tri-focus Optics Technology

Tri-focus optics technology uses optics with three specific focal lengths: long-range coverage, middle-range coverage, and short-range coverage. The detector applies the three focal lengths to 86 detection zones, which combine to make 11 solid curtains of detection. Tri-focus optics technology also includes two pyroelectric sensors, which deliver twice the standard optical gain. The sensors process multiple signals to deliver precise performance virtually free of false alarms.

Active White Light Suppression

An internal light sensor measures the level of light intensity directed at the face of the detector. Sensor data fusion technology uses this information to eliminate false alarms from bright light sources.

Field Selectable Coverage (18 m x 25 m or 7.5 m x 10 m)

Installers can use a DIP switch to select 18 m x 25 m or 7.5 m x 10 m (60 ft x 80 ft or 25 ft x 33 ft) coverage.

Dynamic Temperature Compensation

The detector adjusts PIR sensitivity to identify human intruders at critical temperatures. Dynamic temperature compensation detects human body heat accurately, avoids false alarms, and delivers consistent catch performance at all operating temperatures.

Cover and Wall Tamper Switch

When an intruder removes the cover or attempts to separate the detector from the wall, a normally-closed contact opens to alert the control panel.

Self-adjusting LED

The LED brightness adjusts automatically to the surrounding light level. A blue light emitting diode (LED) indicates dual alarms and activates during a walk test. A yellow LED indicates microwave alarms, and a red LED indicates PIR alarms.

Remote Walk Test LED

Users can enter a command at the control panel to remotely enable or disable the walk test LED. Users can locally enable or disable the walk test LED through the DIP switch.

Alarm Memory

Alarm memory flashes the alarm LED to indicate stored alarms for use in multiple unit applications. A switched voltage from the control panel controls the alarm memory.

Solid State Relays

Solid state relays send silent alarm output signals to provide a higher level of security and reliability. An external magnet will not activate the relay. The solid state relay uses less current than a mechanical relay, providing longer standby capacity during a power loss.

Draft, Insect, and Small Animal Immunity

The sealed optic chamber provides immunity to drafts and insects, reducing false alarms. Small animal immunity reduces false alarms caused by animals such as rodents.

Remote Self Test

A remote self test initiates when the walk test input switches to its true state. The alarm relay and alarm LED activate for four seconds following a successful test. The trouble relay activates, and the alarm LED flashes following a failed test.

Input Power Supervision

When the power is lower than 8 V, a low input power trouble condition activates the trouble relay and causes the LED to flash. The trouble condition clears automatically when power reaches or exceeds 8 V.

Trouble Memory

When the walk test input switches to its true state for less than two seconds, LED flashes to indicate the most recent trouble condition. If there is no trouble in memory, the LED does not flash. After twelve hours, or after the detector receives a second walk test pulse for two seconds or less, the LED stops flashing and the trouble memory clears.

Parts Included

Quantity	Component
1	Detector
2	Flat-head screws
2	Screw anchors
1	Nylon cable tie
1	Pattern Mask
1	Installation Guide

Certifications and Approvals

The detectors are designed to comply with the following standards and approvals.

cULus - UL639, Intrusion Detection Units

CE

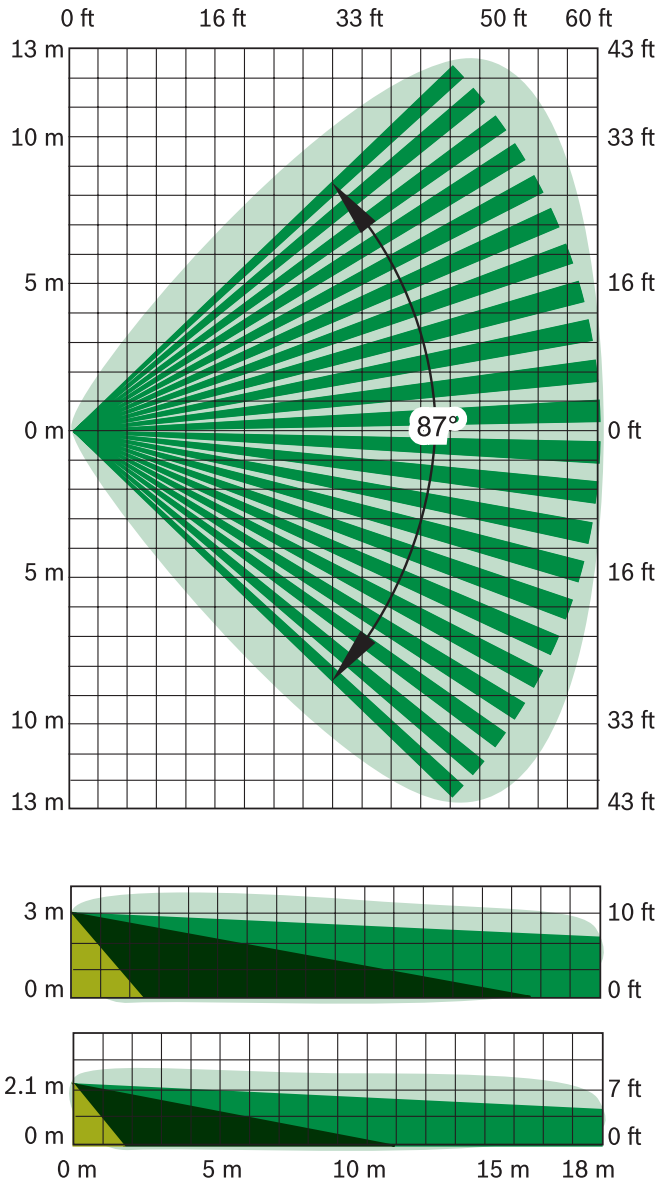
C-Tick

EN50131-1 Grade 2

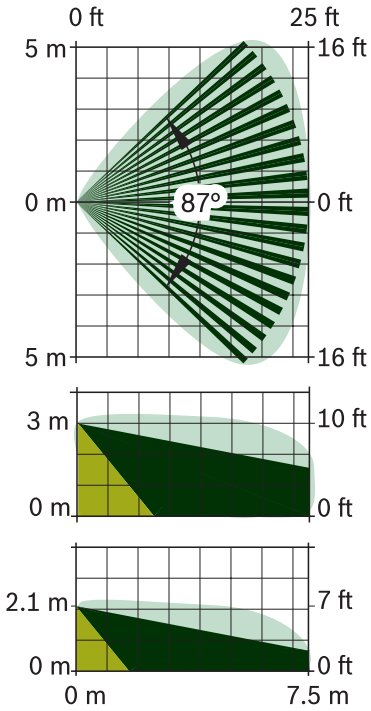
FCC

IC

Installation/Configuration Notes



Long-range Coverage 18 m x 25 m (60 ft x 80 ft)



Selectable Short-range Coverage 7.5 m x 10 m (25 ft x 33 ft)

Mounting Considerations

The recommended mounting height is 2 m to 3 m (7 ft to 10 ft).
Use an optional B328 Gimbal-mount Bracket or B335-3 Low-profile Swivel-mount Bracket to surface-mount the detector on a flat wall.
Use an optional B338 Universal Ceiling Bracket to mount the detector on the ceiling.

Technical Specifications

Enclosure Design

Color:	White
Dimensions:	136 mm x 69 mm x 58 mm (5.25 in. x 2.75 in. x 2.25 in.)
Material:	High-impact ABS plastic

Environmental Considerations

Relative Humidity:	0 to 95%, non-condensing
Temperature (Operating and Storage):	-29°C to +55°C (-20°F to +130°F) *For UL Certificated installations, 0°C to +49°C (+32°F to +120°F)*
Environmental Class II	
IP Rating:	IP 41, IK02 (EN60529, EN50102)

Indicators

Dual Alarm Indicator:	Blue LED
Microwave Alarm Indicator:	Yellow LED
PIR Alarm Indicator:	Red LED

Number of...

Zones:	86

Frequency Information

Radio Frequency Interference (RFI) immunity:	No alarm or setup on critical frequencies in the range from 26 MHz to 1 GHz at 50 V/m.
ISC-PDL1-W18G Microwave Frequency:	10.525 GHz
ISC-PDL1-W18H Microwave Frequency:	10.588 GHz

Outputs

Relay:	Solid state relay, normally-closed (NC) contacts power supervised. 3 W, 125 mA, 25 VDC, resistance < 10 ohm
Tamper:	Normally-closed (NC) contacts (with cover on) rated at 25 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.
Trouble:	Solid state relay normally-closed (NC) contacts

Power Requirements

Voltage (Operating):	9 VDC to 15 VDC
Current (Maximum):	< 25 mA
Current (Standby):	Up to 13 mA

Ordering Information

ISC-PDL1-W18G PIR Microwave Detector — ISC-PDL1-W18G

Indoor PIR 10.525 GHz microwave commercial detector. Provides tri-focus optics, sensor data fusion, 18 m x 25 m (60 ft x 80 ft) coverage, and LEDs in blue, yellow, and red.

ISC-PDL1-W18H PIR Microwave Detector — ISC-PDL1-W18H

Indoor PIR 10.588 GHz microwave commercial detector. Provides tri-focus optics, sensor data fusion, 18 m x 25 m (60 ft x 80 ft) coverage, and LEDs in blue, yellow, and red.

Accessories

B328 Gimbal-mount Bracket — B328

Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.

B335-3 Low-profile Swivel-mount Bracket — B335-3

Plastic, swivel, low profile bracket for walls. The vertical pivot range is +10° to -20°; the horizontal pivot range is ±25°. Shipped in packages of three.

B338 Universal Ceiling Bracket — B338

Plastic swivel bracket for ceilings. The vertical pivot range is +7° to -16°; the horizontal pivot range is ±45°.

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